

WHAT IS CLAIMED IS:

1. A method for document collaboration between a managing author operating a first computer system and a contributing author operating a second computer system, comprising:

said managing author, selecting an original document stored in a first memory accessible to said first computer system ;  
creating an electronic replica of said original document;  
selecting word processing editing rights for said electronic replica; and  
sending to a second memory location, accessible by said second computer system, a message comprising said word processing editing rights and said electronic replica.

2. The method of claim 1 further comprising:  
receiving an electronic response from said contributing author, said electronic response comprising a difference file;  
determining proposed changes for changing said original document using said difference file and said original document; and  
said managing author, using said first computer system, determining a selected change from said proposed changes.

3. The method of claim 2 further comprising:  
concurrently with displaying said selected change, displaying a part of said original document incorporating said selected change.

4. The method of claim 1 wherein said word processing editing rights comprises restricting an output of said electronic replica.

5. The method of claim 4 wherein said restricting said output of said electronic replica comprises restricting copy out and printing.

6. The method of claim 1 wherein said word processing editing rights comprises restricting editing to comment only.

7. The method of claim 1 wherein said word processing editing rights comprises an expiration date on said electronic replica.

8. The method of claim 1 wherein said electronic replica has no metadata.

9. The method of claim 1 wherein said electronic replica has any accompanying change history removed.

10. A data structure stored in a computer readable medium for providing a replica of an original document from a managing author to a contributing author, said data structure comprising:

extensible markup language (XML) data comprising editing rights for said replica; and

a word processing file.

11. The data structure of claim 10 wherein said extensible markup language data further comprises an e-mail return address for returning said contributing author's edits to said replica.

12. The data structure of claim 10 wherein said word processing file has associated metadata removed.

13. A system for sending a replica of an original document from a managing author to a contributing author for review, said system comprising:

a first software module on a first computer system, for creating said replica from said original document stored in a document management system;

a user interface module for selecting editing privileges of said contributing author;

a second software module on said first computer system, for creating an EDF file, wherein said EDF file comprises said replica and selected editing privileges of said contributing author;

an encryption module for encrypting said EDF file; and

an e-mail module for e-mailing said EDF file, after said encrypting, to said contributing author.

14. The system of claim 13 wherein said selected editing privileges is in an XML format.

15. The system of claim 13 wherein said EDF file further comprises a return address for a response by said contributing author.

16. A method, using a computer system, for a collaborating author to respond to a request to review a replica of an original document sent by a managing author, said method comprising:

editing said replica, said editing forming an edited replica; and  
creating a difference file using said replica and said edited replica.

17. The method of claim 16 wherein said editing said replica is based on editing privileges set by said managing author.

18. The method of claim 16 further comprising:  
generating a response file comprising XML data and said difference file, said XML data comprising an item identifying said collaborating author; and  
encrypting said response file.

19. The method of claim 18 wherein said XML data further comprises a unique identifier identifying said response file.

20. The method of claim 16 further comprising:  
receiving an EDF file;  
decrypting said EDF file; and  
extracting said replica and said editing privileges from said EDF file.

21. The method of claim 16 wherein said replica is a Word document.

22. A method, using a computer system, for generating a response to an unedited replica of an original document sent by a managing author to a contributing author for review, comprising:

forming a revised replica by editing said unedited replica;  
partitioning said unedited replica into a first plurality of segments;  
sorting segments of said first plurality of segments into a binary tree based on a comparison operator;  
partitioning said revised replica into a second plurality of segments;

for a segment of said second plurality of segments, finding a best match in said binary tree to form a block of at least one matching byte; and  
creating a difference file comprising said block.

23. The method of claim 22 further comprising extending said block by matching bytes on both sides of said block.

24. The method of claim 22 wherein a segment of said first plurality of segments is delimited by a delimiter.

25. The method of claim 22 wherein said best match comprises an exact match.

26. The method of claim 22 wherein said best match comprises a partial match.

27. A method in a computer system for processing a proposed change to a replica of an original document by a contributing author, wherein said replica is sent by a managing author, comprising:

said contributing author inputting said proposed change into said computer system;

in response to said inputting, displaying said proposed change without mark-up on a display; and

sending said proposed change to said managing author.

28. The method of claim 27 further comprising displaying a customer branding in a third window.

29. The method of claim 27 further comprising automatically generating an e-mail comprising said proposed change upon user selection .

30. A data structure stored in a computer readable medium for providing an edited replica from a contributing author to a managing author, said data structure comprising:

data comprising an identification of said contributing author; and  
a difference file formed from using said edited replica.

31. The data structure of claim 30 wherein said data is in eXtensible Markup Language (XML) format.

32. The data structure of claim 31 wherein said data further comprises an e-mail address for said contributing author.

33. The data structure of claim 31 wherein only said data is encrypted when said data structure is sent to said managing author via a communications network.

34. The data structure of claim 30 wherein at least said difference file is encrypted when said data structure is sent to said managing author via a communications network.

35. A system for distributing processing of a plurality of comparisons between a replica sent by a managing author and a plurality of edited replicas at a plurality of contributing authors, comprising:

a first computer system for creating said replica from said original document;

a plurality of second computer systems for receiving said replica, wherein each second computer system of said plurality of second computer systems comprises:

a word processing module for editing said replica by a contributing author of said plurality of contributing authors to form an edited replica of said plurality of edited replicas; and

a difference module for producing a difference file from said edited replica and said replica.

36. A computer system, for a collaborating author to respond to a request to review a replica of an original document sent by a managing author, comprising:

a word processing module for editing said replica, said editing forming an edited replica; and

a difference module for creating a difference file using said replica and said edited replica.

37. The computer system of claim 36 further comprising:

an encryption module for encrypting data comprising an item identifying said collaborating author; and

a response module for generating a response file comprising said encrypted data and said difference file.

38. The computer system of claim 37 wherein said encrypted data comprises XML data.

39. The computer system of claim 36 wherein said editing is based on editing privileges set by said managing author.

40. A method, using a computer system, for processing a response from a contributing author, said contributing author editing a replica of an original document sent by a managing author, said method comprising:

receiving said response from said contributing author, said response comprising a difference file;

generating a comparison file from said difference file and said original document;

displaying said comparison file comprising a proposed change by said contributing author; and

modifying said original document with said proposed change accepted by said managing author.

41. The method of claim 40 further comprising displaying said modified original document in an evolving window.

42. A method, using a computer system, for a managing author producing a final document from a plurality of responses received from a plurality of contributing authors, wherein said plurality of responses is based on a replica of an original document, said method comprising:

displaying a comparison window comprising a proposed change from a response of said plurality of responses;

modifying said original document when said proposed change is accepted by said managing author; and

displaying said original document after said modifying in an evolving document window.

43. The method of claim 42 wherein said comparison window is one of said plurality of comparison windows, wherein each comparison window of said plurality of comparison windows is tabbed by a contributing author of said plurality of contributing authors.

44. The method of claim 43 wherein only one comparison window is displayed at a time.

45. The method of claim 42 wherein said comparison window is one of a plurality of comparison windows wherein each comparison window is tabbed by one response of said plurality of responses.

46. The method of claim 42 further comprising displaying a change summary window comprising an expandable hierarchical tree.

47. The method of claim 46 wherein said expandable hierarchical tree has a view selected from a group consisting of a section view, a person view, and a type view.

48. A system for document collaboration from a managing author controlling an original document at a first computer system to a contributing author editing a replica of said original document at a second computer system, comprising:

a document management system under control of said first computer system for maintaining the original document;

a replica module for creating a replica of said original document and sending said replica with accompanying editing instructions to said second computer system;

a contributor module at said second computer system for receiving and editing said replica according to said editing instructions, and for creating a difference file based on said replica;

a receive module for receiving a response from said second computer system, said response comprising said difference file; and

a controller module for extracting proposed changes from said difference file and for deciding which of said proposed changes are accepted.

49. A method using a computer system for producing an evolving document from an original document and an edited copy of said original document, said edited copy produced by a contributing author and sent in a response to a managing author, said method comprising:

obtaining a plurality of areas of a reconstructed edited copy, said reconstructed edited copy partly based on said response, wherein a first area of said plurality of areas comprises a difference between a first part of said original document and a second part of said reconstructed edited copy;

displaying said first area and a second area of said plurality of areas;

when said difference is selected, incorporating said difference into said evolving document; and

after said difference is selected, concurrently displaying said evolving document and said second area.

50. The method of claim 49 wherein said second area comprises another difference between a third part of said original document and a fourth part of said reconstructed edited copy.

51. The method of claim 49 wherein said difference is of a type selected from a group consisting of a deletion, an insertion, a move, or a replacement.

52. The method of claim 51 further comprising displaying a change summary comprising said difference, wherein said change summary is a hierarchical data structure categorized by a selection from a group consisting of a section, a person, or a type.

53. A method for version control in a computerized document collaboration system, comprising:

creating a first replica of an original document by a managing author's computer system;

receiving a first response comprising first changes to said first replica;

reconstructing an edited replica using said first response;



forming a modified original document by incorporating selected changes, from said edited replica into said original document ;

receiving a second response comprising second changes to said modified original document; and

said managing author's computer system associating said second changes with said modified original document.

54. A data structure stored in a computer readable medium for version control of a document collaboration system by a managing author, said data structure comprising:

a collaboration object comprising an original document selected by said managing author;

a document object derived from said collaboration object and comprising a revision object associated with said original document; and

a response object derived from said revision object, said response object associated with a response from a collaborating author to said managing author.

55. A method for document collaboration between a managing author at a first computer system and a contributing author at a second computer system, comprising:

said managing author using said first computer system, selecting an original document from a document management system;

creating an electronic replica of said original document without accompanying metadata;

selecting word processing editing rights for said electronic replica;

securely sending to said second computer system a first message comprising said word processing editing rights and said electronic replica;

said contributing author using said second computer system, editing said electronic replica in accordance with said word processing editing rights to produce response data, said response data comprising a difference file;

sending to said first computer system a second message comprising said response data;

extracting a proposed change to said original document using said difference file and said electronic replica;

displaying said proposed change for viewing by said managing author;  
said managing author, selecting said proposed change for modifying said  
original document;

in response to said selecting, incorporating said proposed change into said  
original document; and

displaying a part of an evolving document, comprising said proposed  
change after selection, concurrently with displaying said proposed change.

56. The method of claim 55 further comprising encrypting said  
response data.

57. A method for assigning a plurality of roles in a document  
collaboration system, wherein a role of said plurality has computer resources associated  
with said role, said method comprising:

a contributing author role for proposing changes to a replica of an original  
document using a contributor application stored on a client computer, said contributor  
application comprising an embedded word processing module; and

a managing author role for selecting proposed changes received from at  
least one contributor application and for incorporating selected changes into said original  
document using a manager application stored on a server computer, said manager  
application comprising another embedded word processing module.

58. The method of claim 57 wherein said word processing module is a  
Microsoft® Word program.

59. The method of claim 57 wherein said wherein said server computer  
is coupled to said client computer via an internet.

60. A method for document collaboration between a managing author  
operating a first computer system and a contributing author operating a second computer  
system, comprising:

creating a replica of a document stored in a first memory accessible to said  
first computer system;

sending to a second memory location, accessible by said second computer  
system, a message comprising said replica; and

receiving a response from said second computer system, comprising a difference file, said difference file created using said replica.

61. The method of claim 60 further comprising:  
extracting from said message editing rights associated with said replica,  
and  
generating said response using editing rights

62. The method of claim 60 further comprising:  
determining proposed changes for changing said document using said difference file and said document; and  
said managing author, using said first computer system, determining a selected change from said proposed changes.